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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,050	12/05/2003	Ion Coman	03-0184 1496.00332	9285
22501 7590 03/02/2010 CHRISTOPHER P MAIORANA, PC LSI Corporation 24840 HARPER SUITE 100 ST CLAIR SHORES, MI 48080				
EXAMINER HICKS, CHARLES N				
ART UNIT		PAPER NUMBER		
2424				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/729,050

**Applicant(s)**

COMAN, ION

**Examiner**

CHARLES N. HICKS

**Art Unit**

2424

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1-4, 9-12, 14-17, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart (US 2004/0252243 A1), hereinafter referred to as Stewart, in

view of Nazarathy (US Patent No. 6,490,727 B1), hereinafter referred to as Nazarathy, in view of Hoarty (US 2003/0140351 A1), hereinafter referred to as Hoarty, in view of Hollar (US 2005/0135614 A1), hereinafter referred to as Hollar.

5. Regarding claim 1, Stewart discloses an apparatus comprising: a transmodulator unit comprising (i) a first input configured to receive a baseband video signal, (ii) a second input configured to receive a first encoded data signal and (iii) an output configured to present a second encoded data signal to a legacy receiver, wherein (i) said second encoded data signal is generated in response to said first encoded data signal and said baseband video signal, **(fig. 1-3, pg. 2-3, paragraphs 29-31 wherein the TSP has input from the antenna and requesting TSRs, and the TSP also has an output to the TSRs).**

Stewart is silent in regards to the signal received being baseband, and output comprising a legacy data signal. However Nazarathy discloses the signal received being baseband, and output comprising a legacy data signal **(fig. 7, col. 10, lines 13-28)**. Motivation to combine the references is due to the fact that the references use modulation techniques in order to facilitate broadcast reception on older set top boxes and the like. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention to allow for communication with older set top boxes.

Hoarty discloses (ii) said first encoded data signal comprises an advanced data signal, wherein said legacy receiver is not compliant with said advanced data signal, (iii) said second encoded data signal comprises a legacy data signal, and (iv) said legacy

data signal comprises said advanced data signal converted to be compliant with said legacy receiver (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**). Motivation to combine the references is due to the fact that the references use modulation techniques in order to facilitate broadcast reception on older set top boxes and the like. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention to allow for communication with older set top boxes.

Stewart, Nazarathy, and Hoarty are silent in regards to disclosing said baseband video signal comprises information (a) generated by said legacy receiver and (b) configured to program said transmodulator unit to convert said advanced data signal to said advanced data signal to said legacy data signal. Hollar discloses said baseband video signal comprises information (a) generated by said legacy receiver and (b) configured to program said transmodulator unit to convert said advanced data signal to said advanced data signal to said legacy data signal (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**). All the elements are known and could be combined by known techniques to produce a predictable result of a transmodulation of legacy set top box receivers. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention.

6. Regarding claim 2, Nazarathy discloses the apparatus wherein (i) said baseband video signal comprises embedded programming information and (ii) one or more operations of said transmodulator unit are controlled in response to said embedded programming information (**fig. 10-12, col. 19, lines 16-40**).

7. Regarding claim 3, Nazarathy discloses the apparatus further comprising: a set-top box configured (i) to generate said baseband video signal in response to said second encoded data signal and (ii) to embed said programming information in said baseband video signal (**fig. 7, col. 17, lines 40-68, col. 19, lines 16-40**).

8. Regarding claim 4, Stewart discloses the apparatus further comprising: a splitter comprising (i) an input port coupled to said set-top box, (ii) a first output port coupled to said transmodulator unit and (iii) a second output port coupled to a video device (**fig. 3-5, pg. 2-3, paragraph 31, pg. 4, paragraph 44**).

9. Regarding claim 9, Stewart discloses the apparatus wherein: said first encoded data signal comprises at least one of (i) an MPEG4 signal and (ii) a digital data signal (**fig. 5-7, pg. 5, paragraph 52**).

Nazarathy discloses said second encoded data signal comprises at least one of (i) a MPEG2 signal and a MPEG signal (**fig. 7, col. 24, lines 19-29**).

10. Regarding claim 10, Stewart discloses the apparatus wherein said transmodulator unit is implemented as a single integrated circuit (**fig. 6-7, pg. 2, paragraph 28**).

11. Regarding claim 11, Stewart discloses the apparatus wherein said second input of said transmodulator unit is further configured to connect to at least one of (i) a low noise block (LNB) of a satellite dish or other antenna, (ii) an over the air (OTA) antenna and (iii) a cable television signal (**fig. 1-3, pg. 3, paragraph 35**).

12. Regarding claim 12, Nazarathy discloses the apparatus wherein said advanced data signal comprises at least one of (i) an 8PSK, 16QAM or similar digitally modulated signal and (ii) a Turbo, LDPC (low density parity check) or other similar coded signal (**fig. 13, col. 24, lines 13-29**).

13. Claims 14-16, and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Hollar, in view of Hoarty.

14. Regarding claim 14, Hollar discloses a method for baseband video signaling in a set-top box local loop connection comprising the steps of: (A) receiving a baseband video signal comprising embedded programming information, wherein said programming information is generated by a legacy receiver (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**).

Hoarty discloses (B) controlling a transmodulator unit in response to said embedded programming information to convert a first encoded data signal that is not compliant with a legacy receiver to a second encoded data signal that is compliant with said legacy receiver (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**). All the

elements are known and could be combined by known techniques to produce a predictable result of a transmodulation of legacy set top box receivers. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention.

15. Regarding claim 15, Hoarty discloses the method wherein said embedded programming information is encoded (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**).

16. Regarding claim 16, Hollar discloses the method wherein said programming information is embedded in said baseband video signal in a set-top box connected to said transmodulator unit (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**).

17. Regarding claim 22, Hollar discloses the method wherein the step (B) comprises: controlling transmodulation of a video signal from an advanced format to a legacy format of said set-top box (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**).

18. Claims 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollar, in view of Hoarty, in view of Stewart.

19. Regarding claim 17, Stewart discloses the method further comprising the steps of: coupling said set-top box to an input port of a splitter; coupling said transmodulator



unit to a first output port of said splitter; and coupling a display device to a second port of said splitter (**fig. 1-4, pg. 2-3, paragraphs 31-32**). All the elements are known and could be combined by known techniques to produce a predictable result of a transmodulation of legacy set top box receivers. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention.

20. Regarding claim 21, Hoarty discloses the method further comprising the step of: embedding said programming information in said baseband video signal such that display of said baseband video signal on said display is unaffected (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**).

21. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart, in view of Nazarathy, in view of Hoarty, in view of Rakib (US 2004/0181800 A1), hereinafter referred to as Rakib.

22. Regarding claim 5, Stewart, Nazarathy and Hoarty are silent in regards to disclosing the apparatus wherein said programming information is embedded in a vertical blanking interval of said baseband video signal. However Rakib discloses the apparatus wherein said programming information is embedded in a vertical blanking interval of said baseband video signal (**fig. 11 and 17A, pg. 28, paragraphs 272-273**). Motivation to combine the references is due to the fact that the references use transmodulation and remodulation techniques to transmit embedded information

upstream and downstream in a cable/satellite broadcast system. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention to allow for use of older set top boxes.

23. Regarding claim 6, Nazarathy discloses the apparatus wherein said transmodulator unit further comprises: a conversion circuit configured to convert said baseband video signal from an analog form to a digital form (**fig. 7, col. 31, lines 1-21, col. 32, lines 13-30**);

and an extraction circuit configured to extract said embedded information from said digital form of said baseband video signal (**fig. 7, col. 31, lines 1-21, col. 32, lines 13-30**).

24. Regarding claim 7, Rabik discloses the apparatus wherein: said extraction circuit is further configured to decode said embedded programming information (**fig. 6-7, pg. 14, paragraphs 125-126**).

25. Regarding claim 8, Rabik discloses the apparatus wherein said transmodulation unit is configured to communicate with said set-top box using MPEG signal elements that do not contain information of a program to be displayed (**fig. 6-7, pg. 14, paragraphs 125-126**).

26. Claims 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Hollar, in view of Hoarty, in view of Rabik.

27. Regarding claim 18, Rabik discloses the method wherein said programming information is embedded in a vertical blanking interval of said baseband video signal (**fig. 11 and 17A, pg. 28, paragraphs 272-273**). All the elements are known and could be combined by known techniques to produce a predictable result of a transmodulation of legacy set top box receivers. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention.

28. Regarding claim 19, Hollar discloses the method further comprising the steps of: converting said baseband video signal from an analog form to a digital form (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**).

Hoarty discloses extracting said embedded information from said digital form of said baseband video signal (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**).

29. Regarding claim 20, Rabik discloses the method further comprising the step of: decoding said embedded programming information (**fig. 1-4, pg. 7, paragraph 53**).

30. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hollar, in view of Hoarty.

31. Regarding claim 13, Hollar discloses a transmodulator unit configured to support baseband video signaling in a set-top box local loop connection comprising: means for receiving a baseband video signal comprising programming information embedded in at least one of a vertical blanking interval and a chroma portion of said baseband video signal, wherein said programming information is generated by a legacy receiver (**fig. 1-3, pg. 3, paragraphs 27-28 and 31-32**).

Hoarty disclose means for controlling said transmodulator unit in response to said embedded programming information to convert a first encoded data signal that is not compliant with a legacy receiver to a second encoded data signal that is compliant with said legacy receiver (**fig. 1-4, pg. 2, paragraphs 11-13, pg. 6, paragraph 61**). All the elements are known and could be combined by known techniques to produce a predictable result of a transmodulation of legacy set top box receivers. Therefore the invention would have been obvious to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Escobar (US 2003/0145331 A1) discloses modifying content retrieved from a set-top box.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES N. HICKS whose telephone number is (571)270-3010. The examiner can normally be reached on M-F 7:30AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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